

ABSTRACT OF THE DISCLOSURE

An electrochemical device comprising at least one substrate (1,7), at least one electroconductive layer (2,6) at least one electrochemically active layer (3,5) capable of reversibly injecting ions, and an electrolyte (4), wherein the electrolyte (4) is a layer or a multilayer stack comprising at least one layer (4b) made of an ionically conductive material capable of reversibly injecting said ions but whose overall degree of oxidation is maintained essentially constant.